

CLAIMS

- 1 1. A method of testing and controlling a fire door system, the method comprising the
2 steps of:
3 sending a first test alert under control of an electronic controller after a first
4 predetermined period of time; and
5 notifying a user by the first test alert that the system needs to be tested.
- 1 2. The method of claim 1, wherein a first predetermined period of time is less
2 than or equal to approximately six months, the step of sending the first test alert further
3 comprising sending the first test alert when the first predetermined period of time has
4 lapsed so that the door can be tested approximately every six months.
- 1 3. The method of claim 2, further comprising:
2 automatically initiating a lockout mode after a second predetermined period of
3 time; and
4 requiring by the lockout mode that the system be tested before the system is
5 released from the lockout mode.
- 1 4. The method of claim 3, wherein the step of automatically initiating the lockout
2 mode comprises:
3 sending a second test alert informing the user that the lockout mode is being
4 initiated; and
5 notifying the user by the second test alert that the system needs to be tested in
6 order to be released from the lockout mode.
- 1 5. The method of claim 3, wherein the second predetermined period of time is less
2 than or equal to approximately one year.

1 6. The method of claim 1, further comprising:
2 controlling a fire door by the electronic controller; and
3 controlling the fire door by a clutch during alarm conditions.

1 7. A method of claim 6, further comprising controlling the fire door by a motor
2 during alarm conditions when a primary power source is on, and wherein:
3 the step of controlling the fire door by the electronic controller further comprises
4 controlling a fire door by the electronic controller in both of alarm conditions and non-
5 alarm conditions when a primary power source is on; and
6 the step of controlling the fire door by the clutch further comprises controlling the
7 fire door by the clutch during alarm conditions when the primary power source is off.

1 8. The method of claim 6, wherein the steps of controlling the fire door further
2 comprise actively opening, closing, or stopping the fire door by pressing a button
3 operatively connected to the electronic controller.

1 9. The method of claim 6, further comprising:
2 receiving a signal in the electronic controller indicating one of the alarm
3 conditions; and
4 initiating a time delay of a predetermined reset delay period of time before which
5 the system cannot be reset.

1 10. The method of claim 6, further comprising the
2 steps of:
3 receiving a signal in the electronic controller indicating one of the alarm
4 conditions; and
5 initiating a warning alert to inform persons of the alarm condition and to warn
6 them that the fire door will be closing.

1 11. The method of claim 6, further comprising the
2 step of resetting the electronic controller by opening the fire door to a fully open position,
3 wherein the step of resetting the electronic controller comprises removing an alarm
4 condition for subsequent regular non-alarm operation of the fire door system.

1 12. The method of claim 6, further comprising periodically checking for a field
2 breakdown in the clutch.

1 13. The method of claim 6, further comprising:
2 pulsating the clutch on and off to control a descent of the fire door in increments;
3 and
4 permitting the door to descend in increments corresponding to the pulsating of the
5 clutch.

1 14. The method of claim 1, further comprising receiving a signal in the electronic
2 controller indicating a loss of function in at least part of the system.

1 15. The method of claim 1, further comprising effecting a bumpless shift from
2 primary power to secondary power.

1 16. The method of claim 1, further comprising periodically checking for a loss of
2 primary power.

1 17. The method of claim 1, further comprising periodically checking for a failure in a
2 secondary power source.

- 1 18. The method of claim 1, further comprising removing an alarm condition for
- 2 subsequent regular non-alarm operation of the fire door system by resetting the electronic
- 3 controller, wherein resetting the electronic controller comprises one of pressing a door
- 4 opening button, pressing a clutch release button, and pulling a hand crank chain.

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